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09/729,800	12/06/2000	Kuniya Kaneko	032218-011	8148

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EXAMINER	
CHOI, PETER H	
ART UNIT	**PAPER NUMBER**
3623	

DATE MAILED: 04/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/729,800	KANEKO ET AL.	
	Examiner	Art Unit	
	Peter Choi	3623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 February 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-15, 17-28, 36-39* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3,5-10,12-16 and 18-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 16 and 29 have been canceled, and claims 8-15, 28, 37, and 39 have been amended. Claims 1-15, 17-28 and 36-39 are pending.

Response to Amendment

2. Examiner notes that Applicant did not challenge the takings of Official Notice in the Office Action mailed October 4, 2005. The following facts/concepts have been admitted as prior art:

- Increased profit is a primary business goal of for-profit businesses
- The cost associated with manufacturing a product or subassembly would inherently include transportation or shipment costs for each step in a manufacturing process
- Applying financial analysis to part or all of a business process is a well known business strategy

Response to Arguments

3. Applicant's arguments filed January 3, 2006 have been fully considered but they are not persuasive.

Applicant argues that nothing in Lilly et al. shows, teaches or suggests the step of calculating a profitability index of a supply chain based upon scheme data regarding order receipt, order placement, purchase and supply.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.,* 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Applicant argues that nothing in Sellers et al. shows, teaches or suggests how the profitability index is calculated or what it based upon.

The Examiner respectfully disagrees. The Design Request Financial Analysis conversation component of Sellers et al. is used to create, maintain, and review various financial simulations associated with for a design request. Expected investment outlays and estimated operating cash flows over the entire economic life of the new product, and assumptions and cost estimates used to determine cash flow are documented. A present value analysis is applied to these estimated values (of investments and cash flows), which provides some basic financial parameters such as the net present value, profitability index, internal rate of return, internal rate of return, and the present value

payback period [Column 89, lines 5-9, Column 113, lines 38-50, Column 114, lines 13-17 and 31-35].

Profitability Index itself is an old and well-known concept in the financial arts, defined as an index that attempts to identify the relationship between the costs and benefits of a proposed project, and is calculated as:

Profitability Index = (Present Value of Future Cash Flows) ÷ (Initial Investment)

Applicant argues that the combination of Lilly et al. and Sellers et al. do not show, teach, or suggest the step of calculating a profitability index based on scheme data regarding order receipt, order placement, purchase and supply.

The Examiner respectfully disagrees. Sellers et al. teaches the concept of a profitability index, calculated based on expected investment outlays, estimated operating cash flows, assumptions and cost estimates. Lilly et al. teaches the use of work orders (scheme data) to determine the best fit of operations based upon resource and material availability and received work orders. The Examiner asserts that expected/estimated investments, cash flows and cost estimates are analogous to resource and material availability. The Examiner also asserts that use of a profitability index as a criterion for capital decision making and as an indicator of the "desirability" of a project is analogous to the step of determining the best fit of operations. The

combined teachings of Sellers et al. and Lilly et al. therefore teach the step of calculating a profitability index based on scheme data regarding order receipt, order placement, purchase and supply.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 1 recites the limitation "the plurality of steps" in line 8. There is insufficient antecedent basis for this limitation in the claim. It is noted that earlier in the claim, a plurality of demand-supply steps of a supply chain are disclosed. The Examiner has assumed that the limitation in line 8 is a reference to the earlier-cited demand-supply steps, or that "the plurality of ***demand-supply*** steps ***of a supply chain***" that ***are*** located at a supply-side terminal of the supply chain.

Claim 1 recites the limitation "the parameter" in line 15. There is insufficient antecedent basis for this limitation in the claim. It is noted that earlier in the claim (line 12), a predetermined parameter was disclosed. The Examiner has assumed that the limitation in line 15 is a reference to the earlier-cited predetermined parameter.

Similar defects exist throughout the claims. Correction is required.

Claim Rejections - 35 USC § 101

5. The rejection of claims 8-14, 28, 37, and 39 under 35 USC § 101 made in the Office Action mailed October 4, 2005 are withdrawn.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 1-4, 6-11, 13-15, 17-28, and 36-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lilly et al. (U.S Patent #5,787,000) in view of Sellers et al. (U.S Patent #5,311,438).

As per claims 1, 8, 15, 17 and 28, Lilly teaches a demand-supply scheme planning apparatus comprising:

(a) first means for storing data regarding a cost and a time that are needed between a purchase step and a supply step of each demand-supply step of a supply chain in which a plurality of demand-supply steps each having an order receipt step, an order placement step, a purchase step, and a supply step that are related to a

commodity **(means for receiving data in a computer, the data including resource availability information for each resource used in the manufacturing process, material availability information for each material used in the manufacturing process, and work order information, which includes materials requirement information)** [Column 3, lines 31-38];

(b) second means for inputting an order receipt scheme of a demand-supply step of the plurality of steps that is located at a supply-side terminal of the supply chain **(schedule all work orders that have been accepted by the manufacturer)** [Column 4, lines 39-44];

(c) third means for determining scheme data **(assigning resource capacity and a start date/time and a finish date/time to each operation)** regarding the order receipt step, the order placement step, the purchase step, and the supply step of each of the plurality of demand-supply steps based on the order receipt scheme inputted **(certain data required to schedule a work order is received in a computer, including resource availability information, material availability information, work order information, operations information, and material requirements information)** and a predetermined parameter **(determine best fit of the operations of each work order in the schedule based upon resource and material availability)** [Column 2, lines 33-40, Column 4, lines 34-38, Column 5, line 24-Column 6, line 25]; and

(e) fifth means for changing the parameter **(in global scheduling mode, the system reschedules all previously entered work orders in order of priority each time a new work order is entered in the system; the sequence in which work**

orders are scheduled ultimately determines the schedule; available capacity is assigned to the first work order in the sequence, any remaining capacity is assigned to the second work order in the sequence, and so on) [Column 9, lines 1-25].

Lilly et al. discloses means for determining the "best fit" of operations for each work order based upon resource and material availability [Column 2, lines 41-44] but does not explicitly teach:

(d) fourth means for calculating a profitability index of the supply chain based on the scheme data determined and the data stored by the first means;

(f) sixth means for setting, as a demand-supply scheme, scheme data that maximizes the profitability index calculated by the fourth means, of the scheme data determined by the third means using the parameter changed.

Sellers et al. teaches a financial analysis means that include means for calculating a profitability index **(a basic financial parameter, such as the profitability index)** [Column 89, lines 7-8, Column 113, lines 46-48, Column 114, lines 15-16, 33-34].

Lilly et al. and Sellers et al. are both directed towards scheduling work orders in manufacturing processes. Combined with admitted prior art that increased profit is a primary business goal of for-profit businesses, it would have been obvious to one of

ordinary skill in the art at the time of invention to modify the teachings of Lilly et al. to include a profitability index, because the resulting combination would obtain the benefits of the use of a profitability index as a financial analysis criterion for capital decision making and also as an indicator of the "desirability" of a project, which in turn are used in determining the optimal scheduling of work orders (as indicated by the maximized profitability index), in alignment with the business' primary goal of increasing profit.

Although not explicitly taught, the determination of best fit of the operations of each work order in the schedule is based upon resource and material availability, and thus is variable.

Both Lilly et al. and Sellers et al. are computerized systems, thus meeting the limitation of claim 15.

Lilly et al. meets the limitations of claims 17 and 28 by further teaching the steps of:

inputting stock records of the product **(resource and material availability information for each resource used in the manufacturing process, specifying the identity and quantity of each resource available)** and the member of each demand-supply step of the supply chain **(external resource may include outside vendors or service providers)** [Column 3, lines 31-35, Column 4, lines 1-7, Column 5, lines 31-53];

storing second data regarding a transportation cost involved in the shipment of the product and a time needed for transportation of the product **(lead time necessary to obtain an additional quantity of each material; period of time required to physically transfer the output units to the next succeeding operation, "transfer time")** [Column 5, lines 43-46, Column 6, lines 21-22]; and

storing third data regarding targets of stock of the product **(identity of each material used in the manufacturing process; identity of the resource(s) at which each operation is to be performed, the sequence in which the operations are to be performed)** and the member of each demand-supply step **(external resource may include outside vendors or service providers)** [Column 4, lines 1-7].

In addition, it has been admitted as prior art that the costs associated with manufacturing a product or subassembly would include transportation or shipment costs for each step in a manufacturing process.

As per claim 2, Lilly et al. teaches an apparatus according to claim 1, wherein the commodity includes a product and a part **(data required to schedule a work order is received in a computer, such as material availability information that includes the identity of each material used in the manufacturing process and the quantity of each material available)** [Column 5, lines 43-54].

Claim 9 recites limitations already addressed by the rejection of claim 2 above; therefore, the same rejection applies.

As per claim 3, Lilly et al. teaches an apparatus according to claim 1, wherein the commodity includes a service **{insofar as the manufacturer is manufacturing and providing items requested in the work order to the customer}**.

Claim 10 recites limitations already addressed by the rejection of claim 3 above; therefore, the same rejection applies.

As per claim 4, Lilly et al. teaches an apparatus according to claim 1, wherein the third means determines an amount of order placement of the demand-supply step, based on at least an amount of order receipt, an amount of stock, and a target amount of stock of the demand-supply step **(material availability information includes the identity and quantity of each material used in the manufacturing process; work order information includes the identity and quantity of the part to be manufactured; material requirements information includes the identity and quantity of materials needed for an operation, the various quantity expressions are reduced to a specific quantity of the part which is required; material availability is expressed in terms of supply and demand for each material used in the manufacturing process)** [Column 5, lines 43-67, Column 6, lines 50-54, Column 8, lines 32-47].

Claim 11 recites limitations already addressed by the rejection of claim 4 above; therefore, the same rejection applies.

As per claim 6, Lilly et al. teaches an apparatus according to claim 1, wherein the first means further stores data regarding an order-receivable amount of each demand-supply step **(scheduling work order for manufacturing products in a manufacturing process, wherein each operation in the work order is assigned resource capacity, a start and finish date/time based upon the resource and material requirements of the operation and the availability of the resource capacity and materials in the manufacturing facility)**, and the fifth means changes a parameter regarding order receipt **(in global scheduling mode, the system reschedules all previously entered work orders in order of priority each time a new work order is entered in the system; the sequence in which work orders are scheduled ultimately determines the schedule; available capacity is assigned to the first work order in the sequence, any remaining capacity is assigned to the second work order in the sequence, and so on)**, as one of the predetermined parameter, within the order-receivable amount [Column 2, lines 33-40, Column 9, lines 1-25].

Claim 13 recites limitations already addressed by the rejection of claim 6 above; therefore, the same rejection applies.

As per claims 7 and 14, Lilly et al. teaches an apparatus according to claim 1, wherein the fifth means changes a parameter that sets a starting timing of the order placement step **(in global scheduling mode, the system reschedules all previously entered work orders in order of priority each time a new work order is entered in the system; the sequence in which work orders are scheduled ultimately determines the schedule; available capacity is assigned to the first work order in the sequence, any remaining capacity is assigned to the second work order in the sequence, and so on)** [Column 9, lines 1-25].

Claim 14 recites limitations already addressed by the rejection of claim 7 above; therefore, the same rejection applies.

As per claim 18, Lilly et al. teaches an apparatus according to claim 17, wherein the fifth means determines a deviation between a value obtained by subtracting the order receipt scheme of the demand-supply step located at the shipment-side terminal from the stock record of the demand-supply step and the stock target value of the demand-supply step **(material availability is determined by netting the demand and supply lists),** as an amount of order placement, and distributing the amount of order placement as order placement to a demand-supply step where the order placement from the demand-supply step at the shipment-side terminal is possible **(if the quantity of the material(s) available on the proposed start date/time does not satisfy the**

material requirement for the operation, then additional material must be obtained) [Column 8, lines 38-47, 51-58, Column 11, lines 24-35, Column 12, lines 16-34].

However, it has been admitted as prior art that the primary business goal of for-business organizations is to increase profits, thereby obviating the step of taking cost and time considerations of work orders into consideration when ordering additional quantities of supplies/parts/materials.

As per claim 19, Lilly et al. teaches an apparatus according to claim 17, further comprising:

(a) sixth means for setting an order receivable range of each demand-supply step based on a fourth data regarding a product order receivable range of each demand-supply step stored in data stored by the first means **(work order information includes the release date (when work should commence) and want date (when work must be complete) for the work order)** [Column 5, lines 55-57]; and

(b) seventh means for determining appropriateness of each demand-supply step based on the order receivable range set by the sixth means and the order receipt of each demand-supply step set by the fifth means **(in the global scheduling mode, all work orders in the system are rescheduled in the order of (1) work order want date, if no work order priority is specified; or (2) work order priority and want date within the same priority level, if a work order priority is specified)** [Column 9, lines 15-19].

As per claim 20,Lilly et al. teaches an apparatus according to claim 19, wherein the seventh means determines whether a processing capability of each demand-supply step is excess or insufficient **(user specifies the resource capacity that is required to perform a particular operation, specifying a minimum and/or maximum resource capacity; if the quantity of the material(s) available on the proposed start date/time does not satisfy the material requirement for the operation, then additional material must be obtained)** [Column 7, lines 26-31, Column 8, lines 38-47, 51-58].

As per claim 21, Lilly et al. teaches an apparatus according to claim 17, further comprising:

(a) sixth means for setting an order receivable range of each demand-supply step based on a fourth data regarding a product order receivable range of each demand-supply step stored in data stored by the first means **(work order information includes the release date (when work should commence) and want date (when work must be complete) for the work order)** [Column 5, lines 55-57];

(b) seventh means for determining whether the order receipt of each demand-supply step set by the fifth means is within the order receivable range set for the corresponding demand-supply step by the sixth means **(if the lead time is less than or equal to the difference between the current date/time and the proposed start date/time, then the system adds the excess to the proposed start date/time to**

determine the start date/time, then the operation is scheduled for the proposed start date/time) [Column 8, lines 63-67, Column 12, lines 16-34]; and

(c) eighth means for, **if** the seventh means determines that the order receipt is not within the order receivable range, changing the schema data set by the fifth means so that the order receipt of the demand-supply step subjected to the determination becomes within the corresponding order receivable range **(if the lead time is greater than the difference between the current date/time and the proposed start date/time, then the system adds the excess to the proposed start date/time to determine the start date/time)** [Column 8, lines 60-63, Column 12, lines 16-34].

As per claim 22, Lilly et al. teaches an apparatus according to claim 21, wherein the eighth means switches a portion or a whole amount of the order receipt of the demand-supply step subjected to the determination to order receipt of a demand-supply step that is capable of shipping a product identical to that shipped by the demand-supply step subjected to the determination **(If the lead time is less than or equal to the difference between the current date/time and the proposed start date/time, then the system adds the excess to the proposed start date/time to determine the start date/time, then the operation is scheduled for the proposed start date/time. If, on the other hand, the lead time is less than or equal to the difference between the current date/time and the proposed start date/time, then the system adds the excess to the proposed start date/time to determine the start date/time, then the**

operation is scheduled for the proposed start date/time) [Column 8, lines 60-67, Column 12, lines 16-34].

As per claim 23, Lilly et al. teaches an apparatus according to claim 21, wherein the seventh means changes, in time, at least an amount of the order receipt of the demand-supply step subjected to the determination relative to the order receipt scheme **(If the lead time is less than or equal to the difference between the current date/time and the proposed start date/time, then the system adds the excess to the proposed start date/time to determine the start date/time, then the operation is scheduled for the proposed start date/time. If, on the other hand, the lead time is less than or equal to the difference between the current date/time and the proposed start date/time, then the system adds the excess to the proposed start date/time to determine the start date/time, then the operation is scheduled for the proposed start date/time)** [Column 8, lines 60-67, Column 12, lines 16-34].

As per claim 24, Lilly et al. teaches an apparatus according to claim 23, wherein the seventh means determines whether a sum of the changed order receipt and the order receipt set by the fifth means is within the order receivable range set by the sixth means, if the eighth means accomplishes order receipt changing, in time, at least an amount of the order receipt **(If the lead time is less than or equal to the difference between the current date/time and the proposed start date/time, then the system adds the excess to the proposed start date/time to determine the start date/time,**

then the operation is scheduled for the proposed start date/time. If, on the other hand, the lead time is less than or equal to the difference between the current date/time and the proposed start date/time, then the system adds the excess to the proposed start date/time to determine the start date/time, then the operation is scheduled for the proposed start date/time) [Column 8, lines 60-67, Column 12, lines 16-34].

As per claim 25, Lilly et al. teaches an apparatus according to claim 21, wherein the eighth means changes at least a portion of the third data of each demand-supply step stored by the first means **(material availability information is updated each time that an operation is scheduled by the system in order to reflect the material demand in the time period the material is needed for the scheduled operation)** [Column 5, lines 48-52].

As per claim 26, Lilly et al. teaches an apparatus according to claim 21, wherein the eighth means changes the scheme data so that the order receipt of each demand-supply step becomes within the corresponding order receivable range **(if the lead time is less than or equal to the difference between the current date/time and the proposed start date/time, then the system adds the excess to the proposed start date/time to determine the start date/time, then the operation is scheduled for the proposed start date/time; user specifies the resource capacity that is required to perform a particular operation, specifying a minimum and/or maximum resource**

capacity; if the quantity of the material(s) available on the proposed start date/time does not satisfy the material requirement for the operation, then additional material must be obtained) [Column 7, lines 26-31, Column 8, lines 38-47, 51-58, 63-67, Column 11, lines 24-35, Column 12, lines 16-34].

Lilly et al. does not explicitly teach the step of changing scheme data so that the profitability index increase. However, it has been admitted as prior art that the primary business goal of for-business organizations is to increase profits, thereby obviating the step of taking cost and time considerations of work orders into consideration when ordering additional quantities of supplies/parts/materials and scheduling work orders for completion/production.

As per claim 27, Lilly et al. teaches an apparatus according to claim 17, further comprising output means for outputting the scheme data set by the fifth means **(means for displaying on a computer screen the assigned resource capacity, assigned start and finish date/time for each operation in a graphical format)** [Column 3, lines 43-47].

As per claim 36, Lilly et al. teaches an apparatus according to claim 1, further comprising an adjustment means for adjusting a distribution of the scheme data regarding the order receipt step, the order placement step, the purchase step and the supply step for each of the plurality of demand-supply steps **(if the lead time is less**

than or equal to the difference between the current date/time and the proposed start date/time, then the system adds the excess to the proposed start date/time to determine the start date/time, then the operation is scheduled for the proposed start date/time; user specifies the resource capacity that is required to perform a particular operation, specifying a minimum and/or maximum resource capacity; if the quantity of the material(s) available on the proposed start date/time does not satisfy the material requirement for the operation, then additional material must be obtained) [Column 7, lines 26-31, Column 8, lines 38-47, 51-58, 63-67, Column 11, lines 24-35, Column 12, lines 16-34].

Lilly et al. does not explicitly teach the step of adjusting scheme data so that the profitability index increase. However, it has been admitted as prior art that the primary business goal of for-business organizations is to increase profits, thereby obviating the step of taking cost and time considerations of work orders into consideration when ordering additional quantities of supplies/parts/materials and scheduling work orders for completion/production.

As per claim 37, Lilly et al. teaches a program according to claim 8, further comprising the step of adjusting a distribution of the scheme data regarding the order receipt step, the order placement step, the purchase step and the supply step for each of the plurality of demand-supply steps **(if the lead time is less than or equal to the difference between the current date/time and the proposed start date/time, then**

the system adds the excess to the proposed start date/time to determine the start date/time, then the operation is scheduled for the proposed start date/time; user specifies the resource capacity that is required to perform a particular operation, specifying a minimum and/or maximum resource capacity; if the quantity of the material(s) available on the proposed start date/time does not satisfy the material requirement for the operation, then additional material must be obtained) [Column 7, lines 26-31, Column 8, lines 38-47, 51-58, 63-67, Column 11, lines 24-35, Column 12, lines 16-34].

Lilly et al. does not explicitly teach the step of adjusting scheme data so that the profitability index increase. However, it has been admitted as prior art that the primary business goal of for-business organizations is to increase profits, thereby obviating the step of taking cost and time considerations of work orders into consideration when ordering additional quantities of supplies/parts/materials and scheduling work orders for completion/production.

As per claim 38, Lilly et al. teaches an apparatus according to claim 17, wherein said fifth means adjusts the scheme data regarding order receipt, order placement, purchase and shipment of each demand-supply step **(if the lead time is less than or equal to the difference between the current date/time and the proposed start date/time, then the system adds the excess to the proposed start date/time to determine the start date/time, then the operation is scheduled for the proposed**

start date/time; user specifies the resource capacity that is required to perform a particular operation, specifying a minimum and/or maximum resource capacity; if the quantity of the material(s) available on the proposed start date/time does not satisfy the material requirement for the operation, then additional material must be obtained) [Column 7, lines 26-31, Column 8, lines 38-47, 51-58, 63-67, Column 11, lines 24-35, Column 12, lines 16-34].

Lilly et al. does not explicitly teach the step of adjusting scheme data so that the profitability index increase. However, it has been admitted as prior art that the primary business goal of for-business organizations is to increase profits, thereby obviating the step of taking cost and time considerations of work orders into consideration when ordering additional quantities of supplies/parts/materials and scheduling work orders for completion/production.

As per claim 39, Lilly et al. teaches a program according to claim 28, further including the step of adjusting the scheme data regarding order receipt, order placement, purchase and shipment of each demand-supply step **(if the lead time is less than or equal to the difference between the current date/time and the proposed start date/time, then the system adds the excess to the proposed start date/time to determine the start date/time, then the operation is scheduled for the proposed start date/time; user specifies the resource capacity that is required to perform a particular operation, specifying a minimum and/or maximum resource**

capacity; if the quantity of the material(s) available on the proposed start date/time does not satisfy the material requirement for the operation, then additional material must be obtained) [Column 7, lines 26-31, Column 8, lines 38-47, 51-58, 63-67, Column 11, lines 24-35, Column 12, lines 16-34].

Lilly et al. does not explicitly teach the step of adjusting scheme data so that the profitability index increase. However, it has been admitted as prior art that the primary business goal of for-business organizations is to increase profits, thereby obviating the step of taking cost and time considerations of work orders into consideration when ordering additional quantities of supplies/parts/materials and scheduling work orders for completion/production.

8. Claims 5 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lilly et al. (U.S Patent #5,787,000) in view of Sellers et al. (U.S Patent #5,311,438) as applied to claims 4 and 11 above, and further in view of Edstrom et al. (U.S Patent #5,233,533).

As per claim 5, Lilly et al. does not explicitly teach an apparatus according to claim 4, wherein the parameter includes the target amount of stock, and the fifth means changes the target amount of stock.

However, Edstrom et al. teaches an allocation of inventory so as to determine a target amount **(daily target amount of "stock")**, enabling a net available amount per day, from which a manufacturing or purchasing order is generated for materials not available. [Column 14, line 62 – Column 15, line 6].

Edstrom et al. is also directed towards scheduling the manufacture of items. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify the Lilly-Sellers combination to include target stock as a parameter that is changed when determining the scheme that maximizes the profitability index, such as suggested by Edstrom et al.'s daily computation of the available stock amount, in order to ensure that the stock amount is not below a desired level based on projected or historical work order information.

Claim 12 recites limitations already addressed by the rejection of claim 5 above; therefore, the same rejection applies.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter Choi whose telephone number is (571) 272 6971. The examiner can normally be reached on M-F 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tariq Hafiz can be reached on (571) 272-6729. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Peter Choi
Examiner
Art Unit 3623

PC

April 16, 2006

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